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09/401,070	09/22/1999	ARTHUR ANDERSON	01-3876	4148
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EXAMINER				
HOANG, THAI D				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/401,070

Applicant(s)

ANDERSON ET AL.

Examiner

THAI D. HOANG

Art Unit

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-54 and 56-79 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-54 and 56-79 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-884)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 8/25/2008 with respect to claims 1, 15, 26, 33, 51, 56, 70 and 75 have been fully considered but they are not persuasive.

Pages 19-20 of the remarks, Applicants argued that the references do not teach *the accessory is monitored by transmitting a status monitoring message from the headset adapter over the accessory interface bus to the accessory* as recited in the amended claims. Examiner respectfully disagrees. Applicants are directed to figs. 6A-B, col. 7, lines 38-63 of Kowalski's reference, wherein Kowalski teaches this feature.

2. Applicant's arguments with respect to claim 40 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1-32, 51-54, and 56-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Kowalski (USPN 4,654,655), of record.

4. Regarding claims 1, 14-15, 26, 51, 56, and 66, Applicant admits as prior art a telecommunication system comprising: a telephone headset (p. 1, lines 13-20); a headset adapter configured to be coupled to the telephone headset and having an accessory interface bus (p. 2, lines 10-12, where the headset accessories are coupled to the headset adapter, and p. 3, lines 1-6, where the coupling is done through a "signaling line," i.e. a "accessory interface bus"), the headset adapter being configured to be coupled to a base telephone (p. 1, lines 17-20, where the headset adapter is used to connect a headset to a telephone system, where it is implicit that the telephone system includes a base telephone); and an accessory for the telephone headset configured to be coupled to the accessory interface bus of the headset adapter (p. 2, lines 6-15, where a remote handset hookswitch and an in-use indicator are examples of accessories coupled to the accessory interface bus). Applicant does not expressly disclose as prior art an accessory interface bus for transmitting and receiving communications packets, wherein the accessory is independently and directly controlled and monitored by the headset adapter after the accessory is detected by the headset adapter, the headset adapter being a microcontroller, the controlling and monitoring occurring when the headset accessory is in communication with the headset adapter via the transmission of communications packets between the accessory and the headset adapter over the accessory interface bus. Kowalski teaches, in a telephone system, independently and directly controlling and monitoring peripheral devices by a bus controller through the use of communication packets (col. 3, lines 7-11, where the bus controller, i.e. an "adapter," independently and directly controls peripheral devices, i.e.

"accessories," over a bus; col. 4, lines 27-31, where the bus controller independently and directly monitors the peripheral devices when it monitors the bus for requests for transmission; and col. 4, lines 23-27, where the control and monitoring is done using packets). In addition, Kowalski teaches implementing the bus controller using a microprocessor, i.e. a "microcontroller" (col. 8, lines 13-15). Kowalski's system permits multiple peripheral units to communicate with the bus controller and with each other (col. 2, lines 15-22). Furthermore, Kowalski teaches the accessory monitored by transmitting a status monitoring message from the headset adapter over the accessory interface bus to the accessory (see fig. 6b, col. 7, lines 38-63). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the accessory bus of Applicant's admitted prior art in a manner similar to that of Kowalski to obtain an accessory interface bus for transmitting and receiving communications packets, wherein the accessory is independently and directly controlled and monitored by the headset adapter after the accessory is detected by the adapter when the headset accessory is in communication with the headset adapter via the transmission of communications packets between the accessory and the headset adapter over the accessory interface bus. One of ordinary skill in the art at the time of the invention would have been motivated to do this to obtain an accessory bus in which the accessory adapter is able to communicate with the accessories.

5. Regarding claims 4-13, 17-25, 28-32, 52-54, 56-65, and 67-69, Examiner notes that these claims recite "intended use" limitations which carry no patentable weight. Specifically, claims 4-13, 17-25, 28-32, 34-39, 52-54, 64, 65, 68, 69, 72-74, and 77-79

claim limitations pertaining to the structure of a packet transmitted on a bus, whereas claims 57-63 and 67 claim limitations pertaining to the communications protocol used on the bus. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In this case, the bus disclosed by Applicant's admitted prior art in view of Kowalski is capable of carrying the claimed packet and of supporting the claimed communications protocols since the bus is merely an electrical connection upon which any type of packet can be transmitted and upon which the given type of communications protocol can be used. Since these cited claims carry no patentable weight, Examiner has not included a separate rejection for these claims.

6. Regarding claim 2, Applicant's admitted prior art in view of Kowalski discloses that the accessory interface bus includes at least one bi-directional signaling line for transmitting and receiving the communications packets between the accessory and the headset adapter in order to control and monitor the accessory (Kowalski: col. 4, lines 23-27, where the TD and CD lines carry packets from the controller to the peripheral devices, and col. 4, lines 46-51, where the TD and CD lines carry packets from the peripheral devices to the controller, such that the TD and CD lines are bidirectional signaling lines).

7. Regarding claims 3, 16, and 27, Applicant's admitted prior art in view of Kowalski discloses that the accessory interface bus further includes: a high voltage rail and a low voltage rail (Applicant: p. 2, lines 3-5, where to provide power to an accessory it is implicit that a high voltage rail and a low voltage rail would be required since a current will only flow between two lines that are of different voltages); and at least one bi-directional signaling line for transmitting and receiving communications packets between the accessory and the headset adapter in order to control and monitor the accessory (Kowalski: col. 4, lines 23-27, where the TD and CD lines carry packets from the controller to the peripheral devices and col. 4, lines 46-51, where the TD and CD lines carry packets from the peripheral devices to the controller, such that the TD and CD lines are bidirectional signaling lines).

8. Claims 33-39 and 70-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Kowalski (USPN 4,654,655), of record, in further view of Endick et al (USPN 5,339,360), of record.

9. Regarding claims 33, 70, and 75, Applicant's admitted prior art in view of Kowalski discloses each limitation of claims 33, 70, and 75, as outlined in the rejection of claims 1, 14, 15, 26, 56, and 66, except that the headset adapter tests the headset accessories. Endick teaches, in a telephone system, testing option modules, i.e. accessories, (col. 8, lines 7-10) where it is implicit that this is done to ensure that the option modules are operating properly. Furthermore, Kowalski teaches the accessory monitored by transmitting a status monitoring message from the headset adapter over

the accessory interface bus to the accessory (see fig. 6b, col. 7, lines 38-63). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the testing of Endick in the system of Applicant's admitted prior art in view of Kowalski to arrive at a system in which the headset adapter is capable of ensuring that the accessories are operating properly.

10. Regarding claims 34-39, 72-74, and 77-79, Examiner notes that these claims recite "intended use" limitations which carry no patentable weight. Specifically, claims 34-39, 72-74, and 77-79 claim limitations pertaining to the structure of a packet transmitted on a bus. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In this case, the bus disclosed by Applicant's admitted prior art in view of Kowalski in further view of Endick is capable of carrying the claimed packet since the bus is merely an electrical connection upon which any type of packet can be transmitted. Since these cited claims carry no patentable weight, Examiner has not included a separate rejection for these claims.

11. Regarding claims 71 and 76, Applicant's admitted prior art in view of Kowalski in further view of Endick discloses that the accessory interface bus includes at least one bi-directional signaling line for transmitting and receiving the communications packets between the accessory and the headset adapter in order to control and monitor the accessory (Kowalski: col. 4, lines 23-27, where the TD and CD lines carry packets from

the controller to the peripheral devices and col. 4, lines 46-51, where the TD and CD lines carry packets from the peripheral devices to the controller, such that the TD and CD lines are bidirectional signaling lines).

12. Claims 40, 43, 45 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Kowalski (USPN 4,654,655), and further in view of Markowitz (USPN 6,484,212 B1), of record.

13. Regarding claim 40, Applicant admits as prior art a telecommunication system comprising: a telephone headset (p. 1, lines 13-20); a headset adapter configured to be coupled to the telephone headset and having an accessory interface bus (p. 2, lines 10-12, where the headset accessories are coupled to the headset adapter, and p. 3, lines 1-6, where the coupling is done through a "signaling line," i.e. a "accessory interface bus"), the headset adapter being configured to be coupled to a base telephone (p. 1, lines 17-20, where the headset adapter is used to connect a headset to a telephone system, where it is implicit that the telephone system includes a base telephone); and an accessory for the telephone headset configured to be coupled to the accessory interface bus of the headset adapter (p. 2, lines 6-15, where a remote handset hookswitch and an in-use indicator are examples of accessories coupled to the accessory interface bus). Applicant does not expressly disclose as prior art an accessory interface bus for transmitting and receiving communications packets, wherein the accessory is independently and directly controlled and monitored by the headset adapter after the accessory is detected by the headset adapter, the headset adapter

being a microcontroller, the controlling and monitoring occurring when the headset accessory is in communication with the headset adapter via the transmission of communications packets between the accessory and the headset adapter over the accessory interface bus. Kowalski teaches, in a telephone system, independently and directly controlling and monitoring peripheral devices by a bus controller through the use of communication packets (col. 3, lines 7-11, where the bus controller, i.e. an "adapter," independently and directly controls peripheral devices, i.e. "accessories," over a bus; col. 4, lines 27-31, where the bus controller independently and directly monitors the peripheral devices when it monitors the bus for requests for transmission; and col. 4, lines 23-27, where the control and monitoring is done using packets). In addition, Kowalski teaches implementing the bus controller using a microprocessor, i.e. a "microcontroller" (col. 8, lines 13-15). Kowalski's system permits multiple peripheral units to communicate with the bus controller and with each other (col. 2, lines 15-22). Furthermore, Kowalski teaches the accessory monitored by transmitting a status monitoring message from the headset adapter over the accessory interface bus to the accessory (see fig. 6b, col. 7, lines 38-63). The admitted prior art and Kowalski do not teach the step of receiving a communication packet at the headset adapter base over the interface bus from the accessory and identifying from a rate bit in the communication packet a communication packet transmission rate. However, Markowitz discloses the user devices send a bandwidth information to a controller (fig. 8-9, col. 6, lines 38-60.) Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the accessory bus of Applicant's admitted prior art

in a manner similar to that of Kowalski to obtain an accessory interface bus for transmitting and receiving communications packets, wherein the accessory is independently and directly controlled and monitored by the headset adapter after the accessory is detected by the adapter when the headset accessory is in communication with the headset adapter via the transmission of communications packets between the accessory and the headset adapter over the accessory interface bus. One of ordinary skill in the art at the time of the invention would have been motivated to do this to obtain an accessory bus in which the accessory adapter is able to communicate with the accessories.

14. Regarding claim 43, Applicant's admitted prior art in view of Kowalski does not expressly disclose detecting errors in the transmission of the command or status request signal from the adapter base over the interface bus; however, Examiner takes official notice that error detection is well known in the art as a way to ensure reliable transmission of data. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to detect errors in the transmission of the command or status request signal from the adapter base over the interface bus to ensure reliable transmission of data.

15. Regarding claim 45, Applicant's admitted prior art in view of Kowalski does not expressly disclose receiving a response signal from the accessory returning information on the current status of the accessory when a status request signal is transmitted; however, receiving a status of a device after requesting a status of the device is well

known in the art because it allows a controller to determine the status of a device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to receive a response signal from the accessory returning information on the current status of the accessory when a status request signals is transmitted to allow the base to determine the status of an accessory.

16. Regarding claim 49, Applicant's admitted prior art in view of Kowalski does not disclose holding the accessory bus at a predetermined level for a predetermined amount of time after a command signal is transmitted to the accessory, in order to allow the accessory to acknowledge receipt of the command signal. However, Applicant's admitted prior art in view of Kowalski does disclose that signals can collide with higher priority devices winning control of the bus (Kowalski: col. 4, lines 63-66). Examiner takes official notice that it is well known in the art to have devices respond to requests. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to hold the accessory bus at a predetermined level for a predetermined amount of time after a command signal is transmitted to the accessory, in order to allow the accessory to acknowledge receipt of the command signal.

17. Claims 41 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Kowalski (USPN 4,654,655) and Markowitz (USPN 6,484,212 B1), of record, as applied to claims 40 and 45 above, and further in view of Yamaguchi (USPN 5,278,848), and King (USPN 3,793,488), of record.

18. Regarding claims 41 and 46, Applicant's admitted prior art in view of Kowalski does not expressly disclose that each communications packet includes a synch pulse which defines a transmission rate for the communications packet. Rather, Applicant's admitted prior art in view of Kowalski discloses that the rate is controlled using a separate line (Kowalski: col. 3, lines 61- 68). Yamaguchi discloses, in a bi-directional communication system, having a synch pulse contained in each packet (col. 8, lines 10-15 where a frame and a packet can be viewed as being analogous). Yamaguchi further discloses that synch pulses are well known in the art (col. 10, lines 9-14). Typically a synch pulse is used in order to ensure that the transmitter and receiver have the same clock signal. If there is a mismatch in clocking, the receiver may not sample fast enough (sample for the wrong transmission rate) or it may sample at the wrong time periods such that the receiver will not be able to properly read a transmitted signal, as is evidenced by King (col. 2, lines 10-39). It is implicit that the use of a synch pulse would obviate the need for a separate communication line. Therefore it would have been obvious to one of ordinary skill in the art of packet communications to include a synch pulse which defines a transmission rate for the communications packet to ensure eliminate the cost of having multiple signaling lines.

19. Claims 42, 44, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Kowalski (USPN 4,654,655) and Markowitz (USPN 6,484,212 B1), of record, in further view of Yamaguchi (USPN 5,278,848) and King (USPN 3,793,488), of record, as applied to claims 41 and 46 above, and further in view of Waechter et al (USPN 4,943,963), of record.

20. Regarding claim 42, Applicant's admitted prior art in view of Kowalski in further view of Yamaguchi in further view of King discloses that the communications packet further includes a source address and a destination address (Kowalski: col. 5, lines 5-12). Applicant's admitted prior art in view of Kowalski in further view of Yamaguchi in further view of King does not disclose that the communication packet includes a source address indicating a bus address of the source of the communications packet and a destination address indicating a bus address of the destination of the communications packet; however, using addresses to identify a source and a destination is well known in the art. For instance, Waechter discloses, in a bi-directional bus communication system, the use of a source address for indicating the source of the packet and a destination address for indicating the destination of the packet (col. 5, lines 21-53). It would have been obvious to one of ordinary skill in the art of communications to include a destination address in order to indicate for which unit the packet is destined and a source address in order to indicate from which unit the packet originated since such addressing is well-known in the art.

21. Regarding claim 44, Applicant's admitted prior art in view of Kowalski in further view of Yamaguchi in further view of King in further view of Waechter discloses that the communications packet further includes a checksum for detecting errors in the transmission of the communications packet (Waechter: col. 5, lines 25-45).

22. Regarding claim 48, Applicant's admitted prior art in view of Kowalski in further view of Yamaguchi in further view of King does not expressly disclose that the

communications packet further includes a checksum for detecting errors in transmission of the communications packet from the accessory to the adapter base; however, using a checksum to detect errors in a communications packet is well known in the art, as is evidenced by Waechter (col. 5, lines 25- 45). It would have been obvious to one of ordinary skill in the art at the time of the invention to have a checksum in order to ensure that the packet was transmitted properly.

23. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Kowalski (USPN 4,654,655), of record, in further view of Yamaguchi (USPN 5,278,848), of record, in further view of King (USPN 3,793,488), of record, as applied to claim 41 above, and further in view of Jones et al (USPN 5,140,611), of record.

24. Regarding claim 50, Applicant's admitted prior art in view of Kowalski in further view of Yamaguchi in further view of King does not disclose that the communications packet includes a plurality of bits with each bit having a high bit portion and a low bit portion such that each bit has a rising edge and a falling edge within a single bit period, and further wherein the rising edge and the falling edge are be used to synchronize transmission of the command or status request signal after each bit is transmitted. Jones discloses, in a communication system, having each communications packet include a plurality of bits with each bit having a high bit portion and a low bit portion such that each bit has a rising edge and a falling edge within a single bit period, and further wherein the rising edge and the falling edge are used to synchronize

transmission of the single communications packet after each bit is transmitted (Fig. 2; col. 2, lines 34-52; col. 2, lines 53-67; and col. 5, lines 36-53). Jones does this in order to allow the stream of data to be self-clocking. It would have been obvious to one of ordinary skill in the art at the time of the invention to have each communications packet include a plurality of bits with each bit having a high bit portion and a low bit portion such that each bit has a rising edge and a falling edge within a single bit period, and further wherein the rising edge and the falling edge are used to synchronize transmission of the single communications packet after each bit is transmitted in order to have a data stream which is self-clocking.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THAI D. HOANG whose telephone number is (571)272-3184. The examiner can normally be reached on Monday-Friday 10:30am-19:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*/Thai D Hoang/
Primary Examiner, Art Unit 2416*